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WILLIAM JAMES

IN responding to the request of the editors to write a few words regarding the late William James, I find myself without any of his books at hand. In any case, an adequate estimate of his philosophy could hardly be made at this time. Those who have been associated with him for many years can alone contribute to the story of his intellectual development—a fascinating topic, I imagine. Those who have studied under him will tell the tale of his teaching. While I have been honored with his friendship for many years, circumstances forbade intimacy, and I am not fitted to speak fitting words of his personality. Of William James neither as philosopher nor as man shall I, then, attempt to write, but will attempt some scattered and hurried impressions of what falls between.

The following bare facts, gleaned in part from the public press, are given as matter of record. He was born in New York City, January 11, 1842, being a little more than a year older than his brother, Henry. He must have come naturally by his psychological and metaphysical bent, for the writings of his father are acute and subtle. Many will recall the delightful introduction to some of them with which William James prefaced an edition of the "Literary Remains" of his father. In a daily paper, it is stated that James Russell Lowell called Henry James, Sr., the "best talker in America." The younger James's early education was somewhat scattering, a fact that perhaps had some bearing upon his freely expressed aversion to the over-regimentation of our American college education. Even Harvard he thought too conventional—especially in its unwillingness to make professors of men who would not work well in harness.

His special training was scientific, not literary, being had at the Lawrence Scientific School, upon an Agassiz expedition, and finally at the Harvard Medical School, where he graduated in 1870. Classicists can doubtless explain how it happened that a man of such exquisite literary sense was the product of a scientific training. The

student of his works notes both that his psychological career grew naturally out of his physiological interests (he was a teacher of physiology in the Harvard Medical School from 1872 to 1880), and that he was moved to strong reaction against the dogmatic attitude of many scientific men of that time. Chauncey Wright, I suppose, was one of the profoundest intellectual influences of his life—but in the reverse direction. In 1878 he married Miss Alice Gibbons, who, with four children, survives him. From 1880 till his retirement in 1907 he was on the Harvard staff as teacher of philosophy or psychology, one or both. That his work was recognized in Europe as well as in this country is witnessed in his honorary degrees from Italy, Switzerland, and England, and his membership in the academy of almost every European country. By common consent he was far and away the greatest of American psychologists—it was a case of James first and no second. Were it not for the unreasoned admiration of men and things German, there would be no question, I think, that he was the greatest psychologist of his time in any country—perhaps of any time. The division of philosophy into schools affects the judging of philosophers, but those of the most opposite schools will cordially acknowledge that Mr. James has been one of the few vital and fruitful factors in contemporary thought.

Every one, I suppose, would cite his sense of reality as Mr. James's foremost trait. I would not say that philosophers as a class are lacking in this trait, but the business of philosophy is to generalize and to systematize; and philosophers are under a greater temptation than others to follow the bent of their own leading principles, to fill in missing considerations and to overlook contrary indications. Mr. James was extraordinarily free from this defect. He saw things in the varied aspects which they have by nature, and was content to report them as he saw them.

The saying, commoner a few years ago than now, but still frequently heard, that Mr. James contradicted himself too much for a philosopher and that he lacked the power of systematic reflection, was in fact a tribute to the sincerity and scope of Mr. James's vision and reporting. As matter of fact, the various portions of Mr. James's "radical empiricism" hang together—in my judgment—in a way indicative of good technical workmanship, but he took things as he found them, and if things were not simple, or consistent, or systematized, his philosophy did not consist in forcing system upon them. In this sense only do I find his thought unsystematic.

In any case, Mr. James has added a precious gift to American philosophic thought. However much or however little it may follow in the path that Mr. James struck out, his influence has made it more hospitable to fact, more sensitive to the complex difficulties of

situations, less complacently content with merely schematic unities. One of the defects that troubled Mr. James in the writings of many of the younger philosophers in America, a certain crabbedness and obscurity of style, is, I think, in some degree traceable to this very influence. It is comparatively easy to appear clear when engaged in expounding second-hand ideas or expatiating upon some convention of literary tradition. Groping in unexplored fields after considerations that are themselves obscure lends itself to clear writing only when it coincides with such lucid vision and constructive artistry as Mr. James himself possessed.

This brings me to what I should name as the second of Mr. James's gifts—his power of literary expression. This power strikes both the layman and the professional philosopher, and strikes them at first glance. I shall not be so stupid as to enlarge upon it, and, not being a literary critic, I shall not attempt to describe it. But it is pertinent to remark that in Mr. James's case not only was the style very much of the man, but it was also of the essence of his vision and of his thought. The picturesqueness of reference, the brilliant accuracy of characterization, by which he has enriched philosophic literature, were a part of his sense for the concrete, and for the varied aspects of the world. He was not a philosopher who by taking pains acquired a literary gift; he was an artist who gave philosophic expression to the artist's sense of the unique, and to his love of the individual. It is no accident that the note which sounds through his last systematic work, "The Pluralistic Universe," is "vision." Akin to the objection that Mr. James was not systematic enough for a philosopher, was the remark that he was more of a literary man than a philosopher—a remark sometimes uttered by those who did not like Mr. James's unprofessional short-cuts to results. The late Dr. W. T. Harris, by temperament and training at the opposite pole of philosophy, did not share this superficial opinion. I recall hearing him say that Mr. James's artistic power was genuine evidence of the depth and reality of his philosophic quality—that only one who had both a direct consciousness of his subject-matter and a sympathetic consciousness of what was stirring, unexpressed, in the minds of other men, could attain Mr. James's artistic distinction.

Even this slight note of appreciation would be incomplete did I not speak of one of the most delightful traits of Mr. James's generous personality—his cordial attitude toward anything that struck him as genuine and individual in the efforts of any other writer, no matter how remote the thought from Mr. James's own. "Philosophy," Mr. James used to say, "is a lonely bug"; and the solitary reflections of many comparatively unknown men in America have

been relieved by a word of appreciative encouragement from Mr. James. At times, indeed, Mr. James's discovery of a Spinoza or a Hegel born out of due season, caused some embarrassment to those of us who were less generous. The same largeness of attitude Mr. James carried into discussion and controversy. It would be a nice matter to decide just how much of his reputation for inconsistency was due to his willingness to make concessions to his opponents in the hope of finding common ground beneath, and to his large-minded indifference to minor details of his own former writings.

It would not be fitting to close a notice in a journal read for the most part by professional philosophers without noting Mr. James's religious belief in the possibilities of philosophy. In spite of his not taking philosophic conventionalities at all seriously, he took philosophy itself very seriously. His popular hold is not at all due, I think, simply to his charm of style. His readers instinctively feel that here is a man who believes something and whose belief is not professional and acquired, but personal and native; a man who believes so deeply in the importance of what he sees and reports that he is not satisfied until his readers also see and have their tone of belief and life modified accordingly. He was, especially in his later writings, an apostle seeking the conversion of souls. Many a note or postal-card of his will be found, I imagine, which refers to the possibility of some discovery, by some one, perhaps to come soon, of a solving word by which light will be made to shine in darkness. When, in one of his recent writings, he refers to the "pragmatistic church," it is not a sectarian and exclusive spirit which animates the phrase, but a fervor of faith in the importance of genuine philosophy. It is a difficult thing for professional philosophers to retain this genuine faith in its simplicity. It gets lost in the mazes of scholarship; wrapped in the napkin of specialization and buried in the ground of professionalism; or it dissipates along with the disillusionizing of early ardent hopes. Our greatest act of piety to him to whom we owe so much is to accept from him some rekindling of a human faith in the human significance of philosophy.

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TRUTH AND ITS OBJECT

TO avoid confusion, it is well to distinguish at the outset between reality as the object of our knowledge and as our object-construct. The real object is that which we must meet, to which we must adjust ourselves, in order to live to the fullest extent. The object-construct or the scientific object is the sum of our knowledge

or definitions about reality, our series and other conceptual tools by means of which we strive to describe and reconstruct our world. Ask the scientist about energy, ether, gravitation, or water and he immediately empties himself of his physical and astronomical equations, his chemical formulæ, etc. These are the scientific elaborations of experience for our convenience and need not be like the facts they aim to manipulate. The equations of Newton are not like the facts or changes that gravitation symbolizes. We thus elaborate our world into various series or contexts.

Every fact can be taken in several contexts. It can be taken in a physical context as part of the interacting world in space; and it can be taken in a psychological context, individual or social. Thus the content, sun, is part of a world of physical processes and known to us by the difference it makes to other physical things and to our psycho-physical organism. The sun is also a concept with a history and place in our thought development, individual and social. Whether we can know has, therefore, a threefold meaning. It may refer to the possibility of taking the same meaning twice within the one stream of experience or to the possibility of two knowers having the same meaning or to the sameness of the physical object. In any case the problem is difficult enough, but it can be simplified by proceeding upon an empirical instead of an *a priori* basis. By this method we shall at least not multiply difficulties.

Can we take an object or fact twice in our individual history? Can we logically take a meaning over without doing violence to it? Can we know the past? Obviously, unless this is possible, identity anywhere else is meaningless, for all knowing in the end must be individual meaning. Social reference itself must have its basis in individual constitution. The ultimate evidence for the existence of sameness must be the individual feeling of sameness, though this sameness of conscious functioning presupposes a degree of structural uniformity on the part of reality which makes the intuition of memory and familiarity possible. The principle of indiscernibles is at any rate valuable as a pragmatic principle. We may indeed have *a priori* reasons, and empirical too, for suspecting the naïve feeling of sameness, even unaided by microscopes, but we can not wholly discredit it without discrediting the judging process itself. We must hold that what can be taken as the same is the same or practically so. There is of course the supplementary social test, in any particular case, viz., that others can recognize our attitudes, our meaningful functioning, as the same or different, and so correct our pathological feelings. But the others, too, are, after all, strands of individual history. If the consciousness of every individual were evanescent, there could be no more recognition of the sameness of other meanings than

of our own. That they can mean that I am the same must, in the end, come back to the continuity of each individual meaning. Apart from such a continuity, social and physical sameness would be alike meaningless. Our meanings, then, like our objective individuals, are the same just in so far as we can acknowledge them to be the same. My concept, sun, still means the same sun, has the same perceptual nucleus of shiny disk and its apparent motion, however much it may have been enriched by astronomical study.

That the past, in so far as it has meaning for us, exists as a part of the present cognitive context is a truism. When it is not thus taken up into the present context it persists potentially as dispositions, manuscripts, or geological strata. It is not well, however, to press this *a priori* argument, derived from the nature of the apperceptive context, too far. If the past were altogether fluent, we could not reconstruct it at all. It never could mean past to us. It must have a content of its own, even though the cognitive context has changed. Pure nothing would not afford a basis for serial construction. In geological transformations the ribs of the old strata do stand out with an individuality of their own, furnishing the basis for our ideal perspective. And in psychological development, too, we must recognize the ribs—certain structures which still stand out as individuals with their own meaning, though in the atmosphere of the present setting. We must feel the functional identity of the past in the present. Here, too, we have record, the retentiveness of the individual mind. The old meanings remain. They cling to their structural conditions as the vine to its artificial support. They do not simply flow into the next moment, for we can acknowledge and compare their own meanings with the new meanings which have replaced them. While the past meanings are past so far as being our personal meanings is concerned, they are not past as ideal structures. As such they can still become memories, to be relieved when the light of consciousness is thrown on them again, even though their place in the growth series makes them have the feeling of pastness. They are part minds—resurrected, dynamically continuous with, but not created by, the present context. They must be acknowledged as having their own setting and meaning independent of the meaning and value which they have in our present cognitive context. They figure thus in two teleological contexts; and these again owe their continuity to their figuring in a world of physical processes.

The dating of this sequence of meanings would be conjectural beyond a few seconds if it were not for the tag of the chronological system associated with the structures. Except for this artificial time coefficient, the understanding of past structures does not differ essentially from the present. They do not differ necessarily in vivid-

ness or distinctness from experiences much more recent. These characters depend upon other conditions besides lapse of time. The difference again in the feeling of intimacy between our own past meanings and other meanings must be sought in the difference in functional continuity with the present. This gives the former a different intuitional value. But this intuition of familiarity may fail even as regards my own successive contexts. The part-minds or associative contexts of the past may become dynamically discontinuous with each other and with the present context as in multiple personality. In such a case we no longer put the personal stamp upon them. We know them, if at all, as we do the contexts of other egos. And even in ordinary life, we may depend entirely upon records for our own past. The interpretation of our past, in any case, is not a matter of knowing the brain continuities, if we did know them, but an immediate recognition of the meanings themselves, whether brought to us by the processes of association or objective records, though this does not disprove the dependence of our sense of continuity upon physical processes.

So socialized is our own experience, so strung out on the conventional measures of time and space, so associated with language, that the interpretation of meanings—even of our own past—is largely an interpretation of language. Words and their contexts are the social correlates of our meanings, in our trying to understand ourselves as well as each other. Brain correlation, however real it may be in the world of causal explanation, has no relevancy to our interpreting of meanings. The support of the world of meanings is language and social institutions. And here we can develop our ideal relations, quite independent of our ignorance of brain dynamics. Logic and ethics were full-fledged sciences before physiology could be said to exist.

But contents must be taken not merely as figuring in the context of individual experience, they must also be taken as figuring in historic social experience. Here a serious problem arises from the fact that we have to recognize a number of coexisting and overlapping individual contexts. As these contexts can not be treated as mere duplicates, the problem of knowing the same object takes another form, viz., whether there can be universal objects or objects for several knowers. Here again the test must be empirical. We, as several knowers, do seem to be able, in spite of the seeming incommensurability of the contexts, to refer to the same content, to agree and to act together. The discrepancies of different fields of consciousness, their different fringes of significance, must be settled by the same inductive tests that any other problem involves, not simply be deduced *a priori*. Such experiments, for ascertaining, for example, the

difference in associative constellations in different individuals, have already been carried on by Münsterberg and others. Such differences, however, have to do with the imagery of the meaning, not its final intent or reference to an objective world.

Through the common understandings of the several subjects we build up the world of science, institutions, and beauty. These unities come to be recognized as existing on their own account. True, these social contexts, as the past contexts, must figure in the cognitive context of the individual subject. They must become known through the agreement of the idea with its intended consequences within individual experience. But we must acknowledge, as independent of the cognitive context, an objective context in which the facts have their own relation and significance, which we must respect. Like individual experience, social experience shows its dependence upon physical continuity for records.

We have been forced to take account of two forms of identity, teleological identity and physical identity. The former has presented two kinds of problems, viz., Can present subjects know the same meaning as past subjects within the same history? And can one individual subject know the same meaning that other subjects know? In either case, teleological identity is closely dependent upon physical identity. For my sharing my own past, or the possibility of memory, is dependent upon processes, not themselves experience. Else there would be no continuity of waking moments with each other. Social agreement, too, involves a physical constitution which makes continuity of centers in space possible and which concerns those records from which we can reconstruct our meanings in time. Identity of meaning is impossible unless we can take our physical objects twice.

Nature itself, as we know it, is our social construct. Our object, nature, at any one time, is nature as our ideal construction, with its systematized expectancies as reduced to scientific technique. Yet, while physical science is a social institution, we can not recognize its object as a social institution. We must distinguish between communicative processes, which we can acknowledge as having a meaning or purpose of their own, and non-communicative processes which we must deal with in a merely external way. While both have their own context, independent of the context of our cognitive purpose, the context of the physical processes is not one of meaning, but of causality. The physical processes furnish a limit which our ideal construction must meet. They are not mere phenomena. We must recognize physical things as figuring in their own context of physical interactions, within their own space constellations, and their own history of cumulative changes. But they also figure, as contents, within social

experience and within the individual conscious moment of perception and interpretation. Only the latter contexts have meaning and value bound up with them. The former *means* a context for our ideal construction merely.

Existentially, if not teleologically, our relation to nature is bipolar. We do not make the gravitational differences, the interstellar distances, and the geological strata when we take account of them. They acquire significance, not existence, when they are taken over out of their own context into our cognitive context. The latter must tally in its coexistences and sequences with the intended context of nature as perceived, if we are to anticipate successfully its facts. However much we socialize nature in our scientific procedure, science itself becomes meaningless unless we also respect nature as having its own context.

We have seen that the processes, which we must take account of, exist in three types of context. They figure in the world of interacting energies, with their causal and space relations; they figure in the social context—in science and institutions, which we must imitate and react upon; they figure in the special context of each individual, as he tries to appropriate the processes as part of his world of meanings. In studying the record of Thales or taking account of our own meaning of yesterday, all three contexts are involved.

What relation do these contexts bear to each other? The physical sun out in space, and my meaning, sun, are both real structures. They make a real difference to each other. The differences my purpose makes to the sun are negligible for scientific purposes. And so we come to treat the process as one-sided. But while we may ignore the differences our thoughts make to the physical world, we must, in order to have knowledge, assume that the universe is a dynamic whole. The thought structure must be dynamically part of the same world with the sun structure. It hangs together with the sun mediately at least, by hanging together with our own nervous system. Every fact within the universe must be capable of making a difference, directly or through intermediaries, to other facts, and especially to human nature, to make knowledge possible. Hence parallelism is an impossible theory. It is well to remember that our splitting the world into ideal series, such as mind and body, does not affect the continuity of the energetic relations of the real world.

When we come to the relation of the context of individual meanings and the social context, it is easier to see how one makes a difference to the other. All thinking, however many private frills and corruscations it may have, is social thinking. It can only develop and only become valid in response to social needs. On the other hand, the very existence of a social context is due to the overlappings,

the common attitudes and contents, of individual minds. This is true practically as well as theoretically. Mutual trust or distrust makes all the difference between economic confidence and social stability, on one hand, and panic and anarchy, on the other. In the plastic world of intersubjective relations, our understanding each other's meanings and our will-attitudes toward each other, does make a decided and recognizable difference to the structures involved, individual or social.

When we come to the past contexts again, here we must recognize a different relation. While these contexts can and do make a difference to the living present, send their radiation on as we restore continuity with them, we can not in turn influence them. We can not change the content of Homer's Iliad by our thinking about it, though we can change its meaning and value for ourselves.

Our relation to the physical world is existentially bipolar, as we must acknowledge the existence of nature, but it is teleologically unipolar, as nature has significance and value only as taken up into the context of human nature. While all other contexts, individual and social, must hang on nature for records, it must hang on them for significance. Our relation to the social context, again, is both existentially bipolar and teleologically bipolar, as we must acknowledge the other subjects both as existing on their own account and possessing a meaning of their own. The past finally we must take as teleologically bipolar, since we must acknowledge that the past contexts have a meaning of their own. But the relation is existentially unipolar.

Each context, finally, must be recognized as having its own perspective and its own rate of motion. While the same content, sun, figures as part of the physical world; in the context of social history; and in individual history, the physical history of the sun, with its dizzy figures, bears no proportion to the history of the social concept, sun; or its cognizing in individual experience. And in each case the object must be recognized as qualified by the relations or laws of the context within which we are taking it—the laws of the associative context of the individual mind; of the intersubjective connections of social history; and of the physical uniformities as observed by natural science.

We can see now that the contention of Bradley that the object selected or referred to in the truth attitude is always reality, is at best a clumsy way of putting it. It reminds one of the story of the man in the Adirondacks who tried to shoot a bear by aiming at him generally. To be sure, underlying our whole search for knowledge is the postulate that the facts or processes which we strive to know, belong to one world with our cognitive purposes and with each other,

i. e., they can make a difference to each other. A wholly indifferent process is obviously unknowable. But while this postulate of continuity is assumed or tacitly implied in all our judgments, it can hardly be said to define the judging process. This does not aim at the universe generally, but is fundamentally selective. The object must be singled out from the immediate mass of experience by the conscious purpose; it becomes meaningful precisely by being thus selected and furnished its specific context. The object of the selective meaning is precisely what the subject sets itself or is interested in, whether Apollo, or two plus two, or gravitation, or your friend's opinion, or time, or space. There is no need of mystification here.

That all the facts or processes of the universe belong together within an absolute context of significance, that every process makes a reflective difference to every other, or is a fragment which dialectically unravels a through and through meaningful system and that therefore in meaning anything whatsoever we can not help, whether we know it or not, to mean the whole, because it is the whole that means—this, while a logically possible hypothesis, is not a self-evident axiom. It does not, with all its confidence, dispel one whit of our ignorance or make scientific experiment and discovery any less indispensable. It must at any rate come as an induction from the needs of human experience, not as an assumption at the outset.

Is the object a past or future state of consciousness? Can the object in the first place be stated as a past state of consciousness? This has been assumed by many philosophers. It has been pointed out that consciousness is ever on the wing; that to attempt to analyze and describe it is to transfix it; and that what reflection deals with, therefore, is something that has been, a *post mortem* autopsy. We are told that knowledge looks backward, while action looks forward. If this were true, we could not only not know our passing moments, we could know no object whatever, as every object of knowledge must figure in this passing stream. To be sure, the reflective attitude is very different from the non-reflective, and an immediate content may later figure in a reflective context. But subject and object can not be separated in time, they are phases or poles of the same reflective moment. The object in any moment is what we mean, that which interests us, that which we conceive as the fulfillment of our purposes whether moving or static. And this surely need not be a past state of consciousness, unless the purpose is to understand the past. And even here we are striving to realize at least an individual, and generally a social, present purpose—a purpose big with the future, which it strives to bring to birth.

On the other hand, it has been maintained that the object must be stated as future states of consciousness. Truth, we are told, con-

sists in its consequences. As attention is essentially prospective; as knowledge is for the sake of adjustment to a larger world, this view seems more reasonable than that the object is a past state of consciousness. But while the future consequences may furnish a corrective of knowledge, they can not be the object aimed at. If the truth attitude consisted in consequences altogether, it would be as meaningless as it would be non-existent. We must aim at a present constitution, we can not aim at what does not as yet exist. Even the consequences as we picture them to ourselves are our ideal constitution, based upon present data, the projection of the uniformities as we must take account of them. In the process of experience, to be sure, both the setting and the values may change; and the aim comes to have new meaning, whether it works or must be abandoned. But the object referred to is not the future consequences with their unforeseen real differences. They constitute quite another story, which must be waited for.

In the effort to arrive at truth, history and science must use the same methods. In either case, we must proceed by means of hypothesis to select and systematize our facts and weave them into a consistent whole. In either case validity must mean that the results permit of social agreement, as the process of investigation goes on. The data of the past must be treated as the data of the present, the motives of Cæsar like those of Roosevelt, the past nebulæ like present nebulæ. In either case, the immediate data must be reconstructed into a whole on the basis of their identities and differences, interpreted in terms of concepts. Sometimes we may simplify our present complex situation by spreading it out as a genetic series. Sometimes we may simplify the past results by reproducing them in present experiments. But whether we are dealing with scientific or historic construction we are striving alike to unify present data.

The difference between history and science is not a methodological difference, but a metaphysical difference. Science is dealing with a world which we acknowledge as existent. The chemist and the psychologist can become perceptually continuous with the objects which they mean, while the historian from his symbolic data, which we call records, is trying to reproduce an object no longer possible of perception or direct communication. Cæsar is no longer marching his legions across the Rubicon; fair Helen and the heroes of the Trojan war are at rest. To be sure, the historian is not dealing with a myth world any more than the scientist. He is dealing with individual meanings or structures continuous with our knowing attitude. But these individuals have survived only through the symbolic substitutes or vehicles of language and art which have carried the meanings down the stream of time. The parchment has survived the creator of

the meaning, though the soul of the meaning itself may outlive many parchments, may require a succession of carriers. The continuity is a mediate continuity; and a mediate continuity which only leads ideally back to the real subject. The real processes themselves, with their living glow, are not reversible or reproducible. The time element, therefore, makes the difference between the facts which the scientist and the historian are striving to reach. This comes in as a limiting or metaphysical concept, however, and does not, as such, play a part in the induction which must depend through and through upon data, whether as regards content or chronology.

Since reality is individual and changing, absolute fact, as our final interpretation of reality, must be regarded as a conceptual limit. Fact as we have it is the result of such identities as can be reached by various coexisting meanings about their common intent, as regards themselves, the past, and nature. This interpretation, however, is an indefinite quantity. Our interpretations and intents must still be reinterpreted to fit into the future contexts of judging experience. The context of history, so far as we know, is never completed. What is the use of talking of the absolutely abiding and permanent, where nothing so far as we know is abiding or permanent, and where life is a continuous readjustment to a changing world of facts and values? On the other hand, what is the use of talking about an absolute flux where, after all, we have a considerable degree of continuity and steadiness? Absolute flux and absolute identity are both logical limits within such a world as ours. Here I can see the advantage of the absolute as an ideal hypothesis. Absolute fact would be the steady glare, the unblinking insight of an absolute ego, the same yesterday, to-day, and forever. Such a limiting concept, like Newton's absolute rate of motion, furnishes at least a convenient devise for showing the relativity of our actual facts, as Newton's hypothesis of an absolute rate of motion shows the relativity of all empirical rates.

One thing, however, is clear. Truth always *means* to be eternal. No truth ever intended its own falsity, even though our knowledge of the law of change has made it evident in general that it may not be final. In so far as it satisfies our demand, is really truth for us, there is stamped upon it its own eternal intent. I have reference here not to the mere symbols that stare us in the face with their permanence of structure, even after they have, like old, worn-out clothes, been discarded. I am referring to the living truth attitude. This always says, "Verweile doch! Du bist so schön." Precisely here lies the tragedy of truth. The real world: the real subject that judges and the real object it means, know of no eternity, they will not be bound by the chains of thought, Parmenides notwithstanding. Thus

our experience is ever outgrowing our concepts, crystallized into language. Even when the subjective structure grows stereotyped and is satisfied with the old point of view, the real situation does not stop for all that. What is more pitiable than to see the old investigator sticking to his antiquated hypothesis in spite of new evidence and larger generalizations?

Truth or meaning is always of the moving now. It makes sketches by catching certain constancies—sketches something like reality, even as the cartoonist's sketch resembles Roosevelt sufficiently for identification—but the real change value it can not catch, except as it congeals into results. Truth, therefore, just because it attempts to fix a world of process, must, to a certain extent, be hypothetical. It can not bind the future. It is based upon the relative uniformities of experience which in the case of the physical world have an almost eternal fixity as compared to our fleeting lives. Outside of that, our equations talk nonsense, as Clifford says. The laws of science, even mechanics, are, after all, our plastic attitudes toward things. Our atoms and ethers, our law of conservation of energy and our law of gravitation, must be retranslated in the light of fresh discoveries. The very fact that our laws are human concepts, apart from any change in the objects they intend, which for mechanical purposes may be practically stable, must make them plastic in the ongoing stream of experience. The unity we find in things is first of all the unity of our experience and must vary in meaning with it.

Is truth conventional? It is easy, we have seen, to confuse truth and its symbols, such as language and mathematical models. Those who have insisted upon the conventional character of truth have, no doubt, been guilty of such confusion. Because language is made up of abstract entities in the way of substantives and relational terms, they have also insisted that our judgments are made up of such entities and hence must be false to the unitary whole which they postulate. Most of the objections raised by such critics of thought as Bradley are based upon the confusion between the abstract symbols, thus converted into entities, and thought. Hence the ease with which thought is transcended in those writers—transcended by first being caricatured, and then abandoned for mysticism.

But it is not only from the side of philosophical mysticism, but from mathematical science as well, that the question of the artificiality of truth has been raised. Nature knows nothing of our ellipses, parabolæ, or equations. Hence is not scientific truth merely conventional? No doubt there is a conventional element in truth. Human nature contributes the measures and series, the descriptive symbols; and, inasmuch as individual invention and technique count for more in science than in common sense, the artificiality seems all

the greater. But it must be recognized that there is a surd of content which we do not invent, viz., the perceptual sequences which we try to describe. This has been called "the universal invariant." The psychologist would probably be sceptical about universal invariants where human individuals are involved, but we may be said to have at least such constancy as permits of pointing and which furnishes the real currency on which our credit system in the way of scientific laws and formulæ do business. The contents may remain constant, however much their values may change in new subjective contexts.

The phenomenal character of our knowledge, however, does not consist in that facts are vitiated by being known, as has sometimes been held. On the contrary, reality, whether of the thing kind or the self kind, is precisely what we must take it as, in different contexts. Truth is what we mean as we systematically strive to imitate the intended object. What makes our knowledge so phenomenal and instrumental lies in what it must omit, rather than in what it says. Our selection is not adequate to the richness of reality. We fail to exhaust the continuities of nature and the manifold of the world we strive to share. And while our conceptions help to piece out our perceptions, still our results are proximate and pragmatic. For the purpose of prediction and practical control we emphasize the common and uniform. But we pay dearly for our invariants in omitting the fleeting values and meanings that give each moment its concreteness. This is especially true in dealing with the world of selves, past and present. For such concreteness we substitute our averages, our classificatory systems, our space and time series. We split the universe into special departments with their partial hypotheses to meet our needs and limitations. It is this selective and abstract character of knowledge that makes it seem so gray compared with the glow of life.

> "Grau, teurer Freund, ist alle Theorie
> Und grün des Lebens goldner Baum."

But it is also this that makes it so convenient an instrument in finding our way from fact to fact and in meeting the complexity of life. The unique and individual shades of meaning, the fleeting rainbow hues of the moment, each will must acknowledge or supply for itself.

What meaning we are justified in attributing to this acknowledged reality depends upon the functional agreement of ideas with further experience. This reading, however, is not a matter of our observing brain changes, but of observing conduct. We do not, unless we are psychologists, consciously watch other peoples' bodily symptoms and compare them with our own, even were this possible.

Differential reaction goes hand in hand with differential meaning, long before we reflect. Through a long process of survival selection and through social imitation, we have come to react spontaneously upon certain situations, including the behavior of other human beings. In higher mind-relations, this means an immediate interpretation of language. This is what gives the intuitive character to all our normal interpretation of other selves. We start with an implied hylozoistic philosophy of the world, which we afterward individualize through experience into objects with more or less definite differential significance—the world of selves and the world of things, the world of teleology and the world of mechanism, with their specific contexts.

The persistent effort to see the various contexts of the world of objects as one pattern, the divine love for the wholeness of things, we call metaphysics. This raises the question: Is metaphysics a science? From time to time the controversy breaks out as to whether metaphysics is science or poetry, whether it deals with evidence or whether it is a realm of free imagination, only limited by its own internal purposes and the law of consistency in working them out. If one looks back over the history of metaphysics, one can find ample reason for such a controversy. Metaphysics has too often attempted to spin its spider-web of logic from its own *a priori* demands, with not only a neglect, but often a conscious disdain, for facts. History and science have been fitted alike into the philosopher's *a priori* models. But whatever may have been the sins of metaphysics in the past—and for them it has duly suffered—we are now agreed that it must proceed by the same methods as science, not by dogmatic conviction, but by tentative hypothesis and verification. This is at least the import of the pragmatic movement. It differs from other sciences, not in its method, but in its intent, in the problems it sets itself, viz., the final interpretation of knowledge and the other overlapping problems of experience, which lie outside the special sciences.

What has inspired the controversy recently, however, seems to be not a question of method, but of value. It has been pointed out that the large generalizations of metaphysics furnish a distinctly esthetic value and that this is the characteristic thing about them. But then why is not all science a branch of art? It is a long time since Plato felt the kinship of truth and beauty and since Lotze pointed out that the feeling for unity, which furnishes the motive and joy of science, is an esthetic feeling. However, while we recognize identities, we must not neglect differences. No doubt science and esthetics are fundamentally the same in their instinctive demands for unity, distinctness and simplicity. But the limitations which are recognized in art and science are vastly different. We do not insist that art shall be

capable of verification in the sense that science must be. The former must minister to the instinct for the beautiful, and must do so by eliminating the accessories and selecting the relations which fit that instinct, while science must deal with the world of fact and ascertain its constitution. Both are selective. Both idealize their world. But while science seeks its verification in the world of existence, art seeks its verification in the growing meaning and unity of human attitudes.

Metaphysics is simply the attempt to find out the truth about reality—not the truth for a certain purpose merely, but what we finally must think about our world. Reality is non-communicative sometimes, like a man who refuses to be interviewed—well, then like the reporter, we have to write up what we think about it from such external marks and probabilities as we can find, not what it thinks. In any case, philosophy, like the enterprising newspaper, has to get out a good many editions to keep up with the procession of history.

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ART AND NATURE

A WATERFALL is a thing of natural beauty; artistic beauty is attributed to the painting of a waterfall. The cross-section of a tree which has been felled in the forest reveals the grain in variegated concentric lines: Is this natural or artistic beauty? Where does landscape gardening belong: Is it nature or art? At what point do the pile of building materials and the plan in the architect's mind become architecture? "A child talks to us with grace in her movements and sweetness in her voice, and we admire what we term her artlessness. A grown woman, an actress perhaps, produces almost identical effects that seem equally pleasing, but we admire in her what we term her art."

I

It was the belief of Plato that real beauty is original, pure, and perfect, while natural beauty and artistic beauty are derived and tainted with imperfection. He regarded the objects both of nature and of art as poor reproductions of an absolute reality abiding in the realm of what he called ideas or archetypal forms. Phenomenal things are but the unreal ephemeral embodiments of eternal meanings or concepts, and the representations of the artist and artisan, while aiming to grasp the essential significance of these universal types, as well as the phenomenal objects, turn out to be, at their best, but copies twice removed from the real. While he does not clearly state the issue between natural and artistic beauty, yet his doctrine of

the non-being of the world of space and time implies that both nature and art (which, for him, includes what we call industrial and fine art) are doomed to inferiority because of their necessarily derived and secondary character. Albeit, both are derived, yet natural beauty, being but one remove from the real, is prior and superior to artistic beauty.

The teaching of Aristotle is an advance upon that of his great predecessor. He redeemed the situation so far as to suggest that art supplies the deficiencies of nature and by the free play of imagery characteristic of artistic creation perfects and even transcends the aims which nature in her ordinary processes is striving to actualize. Here is an implication that natural and artistic beauty are equally real, but that the latter is the fruition of the former. For the Stagirite art is an imitation of nature and "imitation" still has much of the Platonic meaning that the artistic representation is inevitably inferior to the reality represented, but that he does not mean a mere transcript is shown by the fact that he says that the artist may "imitate things *as they ought to be.*" Fine art, for Aristotle, never became symbolic, as in modern times; it always strives to be a likeness of the original, as when he conceives of drama as the portrayal of human emotion and action. But he verges toward the modern view in his theory of poetry (the highest form of art, for him), when he says that verse, as an expression of the universal element in human life, seeks to portray the ideal by getting rid of all contradictions and disturbing irrelevancies. A work of art, he says, is an idealized representation of human life under forms manifest to sense. Art here becomes a creative act which, as Professor Butcher says, "resolves itself into an effort to complete in some sense the work of nature."

The modern theory in general presents a striking contrast to that of the Greeks, yet we find Kant saying that art must turn to nature for her cue. "Beautiful art is art in so far as it seems like nature." Art must have the form of purposiveness without expressing any particular purpose; it must be significant in general without being specifically so. Or, as he puts it, "That is beautiful which pleases in the mere act of judging it"—not for the gratification it gives nor for any definite use, but just for its own sake. " Hence the purposiveness in the production of beautiful art, although it is designed, must not seem to be designed; beautiful art must look like nature, although we are conscious of it as art." "Genius," he adds, "is the talent (or natural gift) which gives the rule to art. Since talent, as the innate productive faculty of the artist, belongs itself to nature, we may express the matter thus: Genius is the

innate mental disposition through which nature gives the rule to art."

Ruskin, too, was a champion of the return of art to nature as the source of all beauty, his theory coinciding with that of Plato in so far as it maintained the priority and superiority of natural beauty. He affirmed that the attempt to copy nature is the origin of all art. The highest beauty is to be found in "nature undisfigured by man," in "virgin nature," because nature is only truly herself when nothing has been done to travesty or deface her. "Beauty," he says, "is the signature of God upon his works." If art would produce objects of beauty she must pattern upon the original. Nature alone possesses perfection; she is the supreme type and eternal model, whether it be "the leaf that fades and falls to the passing wind, the smallest pebble which rolls down from the mountain, or the frailest reed which bends over the water." All the most lovely forms and thoughts are taken directly from natural objects. "We lay it down as a first principle that our graphic art, whether painting or sculpture, is to produce something which shall look as like nature as possible."

Schiller's paradox that man is civilized only in proportion as he has learned to value the semblance above the reality is, however, much more characteristic of the modern point of view. To the romanticist, for example, art is the highest type of beauty since art is the product of the human mind and man is nature's crowning achievement. Natural beauty is contaminated by the concrete forms in which it appears. The highest beauty is the beauty of ideas or meanings which in art struggle to free themselves from their sensuous embodiment. Poetry, on this account, is the highest of the arts, because here meaning emerges in its most untrammeled form. Beauty undergoes an actual transformation in passing through the human mind and becomes charged with a significance that the deepest insight would never find in nature.

Hegel relegates natural beauty to an inferior position, since on his theory, all beauty is derived ultimately from the idea, the meaning, of the object in its relation to the total world-process. The concrete and sensuous husk in which all natural beauty comes to us obscures and defiles its pure essential import. The core and substance of beauty lie in the depth and wealth of significance which are revealed in the ideal as opposed to the sensible world. Nature is Spirit in a swoon, a trance, a sleep, as it were—still unconscious, unawakened. "The natural object is inferior to the art-product because, unlike the latter, it has not been born—born again, that is, of mind."

Mr. Bosanquet who writes the history of romanticism, following

up the Hegelian idea, finds the differentia of natural and artistic beauty in the degree of sophistication. Nature is the world as it exists for the untrained perception of the average man, whereas art implies the culture and expertness which come by knowledge and trained insight—a view similar to that of Taine, who held that the artist is superior to his model, disentangling nature and reinterpreting her according to his own ideas.

II

The difficulty of reconciling these opposed views which find beauty respectively in the objective world of nature and in the subjective world of human nature, suggests that beauty lies in neither taken alone, but in certain relation of the two. Beauty may be a continuous creation through the interaction of subject and object, the dualism of nature and art falling within the evolving content of reality instead of implying a relation of man's mind to an external object lying outside his consciousness. If reality be defined as the content of evolution, it is obvious that beauty may be conceived, not merely in terms of the object-matter, but also in terms of the method of experience. Goethe hints at a new point of view in certain of his aphorisms: Art is the truth of nature. Mere nature is an unreal abstraction. Nature and idea can not be seprated without destroying art as well as life. When artists speak of nature, Idea is always understood, without their being clearly conscious of it. That very thing which strikes the uncultivated as nature, in a work of art, is not nature (outward) but man (inward nature). We know no world but in relation to man; we will have no art except it be an expression of this relation.

If the model and the artist, nature and human nature, are thus intimately bound together, we are to conceive of art and the artist, not as the medium of carrying an outside reality into experience, but as the instruments of evolving a reality which is the immanent content of that experience. Art is not merely revelatory. It itself is but a phase of the real; it is the reality of nature undergoing transformation in terms of human nature; it is the principle of relevancy and adequacy by which man's industry and science give a propitious form to natural objects and events. "Nature is made better by no mean. But nature makes that mean; so o'er that art which you say adds to nature is an art that nature makes."

The true antithesis is not between nature and art, but between subhuman and human nature. In this sense it is clear that in certain spheres art has transcended anything of beauty which we find in nature below man. Artistic beauty implies design, manipulation,

mediation; it selects and arranges with reference to the needs of man; it generalizes and idealizes underlying patterns and types. "From the moment the artist lays his hand upon any natural object," says Goethe, "that object no longer belongs to nature, nay, it may be said that the artist at that moment creates it, since he appropriates the significant, the characteristic, the interesting, that he finds in it, or rather breathes into it a higher value."

But nature as she appears even to the ordinary perception of the average man is only relatively unmediated, since even the so-called natural phenomena are really perceived only as they are apperceived. There is no absolutely virgin nature, no utterly unspoiled presentation. If the differentia of art lies in the manipulation of the material presented by nature, then the felled tree or the log sawed across in such a way as to reveal the grain may be as truly art, in principle, as the polished quartered oak. And why not go a step further back and admit that when the artist looks at a tree he mediates it as truly as when he fells it to the ground and fashions it into a table?

Art is nature humanized. Man's "habits and pursuits leave their mark on whatever he touches," says Professor Santayana. "When absorbed in the beauty of nature we do in fact appear to ourselves to be entirely receptive," says Mr. Hirn, "but in truth our enjoyment, if the enjoyment has any esthetic value at all, is always more or less derived from the activity of our own mind." Any product of fine art may be regarded from the point of view of natural beauty, if we extend nature to include human nature, while nature herself may be regarded as a work of art if we take into account the human manipulations and transformations involved in any act of sense-perception. There is no difference in an ultimate analysis between natural and artistic beauty, since all art must, in the broad sense of the term, be naturally produced, and the crudest perception of beauty by the lowest intelligence involves the creative participation of the percipient.

The distinction between natural and artistic beauty retains a certain value for descriptive purposes, but logically it reduces to a relative difference in mediation. The distinction arises and is of utility solely in relation to the recording and making socially accessible of certain forms of beauty which are then called artistic in contrast with others which have not been thus socialized. Artistic beauty is natural beauty given social embodiment. The difference between art and nature is science. Art is nature becoming "second nature" through the instrumentality of industrial and scientific metamorphosis of its materials. The deliberation and mediation which Hegel and Bonsanquet attribute to art are more properly ascribed to the science by which art has so largely profited and upon

which she has been so constantly dependent for the perfection of her technique.

The true differentia, in other words, is to be found in the purpose of the artist or esthete—as representing a distinct type of human interest and occupation. What is "style" in a work of art but that peculiar form which nature takes in and through its special manifestation in this particular artist and under certain local and temporal conditions? When we demand that a work of art shall be true to nature, all depends upon what aspect of nature is in mind: the expressed purpose (human nature) or the materials (nature) which are the medium of expression. Truth to nature means truth to the law of the process by which she at this moment and here in this artist is evolving; it includes what nature is becoming in man, and in this individual man, as truly as what she is apart from man. In this sense, appreciation may be said to be the keynote of natural beauty; production, of artistic beauty. That is to say, natural beauty is beauty appreciated in terms of the purely personal technique, the sensorimotor adjustments involved in any trained perception; artistic beauty is appreciated in terms of some form of extra-organic, objective, so-called impersonal technique, some phase of the socialized professional method of the artist. Natural and artistic beauty therefore overlap in the case of the appreciator who is also somewhat of an artist.

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NOTE ON A QUANTITATIVE ANALYSIS OF MATHEMATICAL INTELLIGENCE[1]

THE following is a brief summary of the results obtained by an application of the theory of correlation to the analysis of elementary mathematical intelligence, according to the scheme suggested in this JOURNAL.[2]

A set of 83 boys from the five middle forms of an English public school were examined on three mathematical papers (geometry, arithmetic, and algebra), their answers being marked according to a differential system of marking, under the following heads:

A. Memory of definitions and general principles (*e. g.*, principle of superposition) in geometry.

B. Memory of constructions (geometry).

C. Memory of preceding propositions and power of applying them (geometry).

[1] For a further account of the results here described see *Biometrika*, Vol. VII., part 3.

[2] See Vol. VII., p. 14.

D. Recognition of necessity of generality in proof, and power of recognizing general relations in a particular case (geometry).

E. Accuracy in arithmetic.

F. General memory of rules and power of applying them (arithmetic).

G. Power of doing sums in percentage and proportion (arithmetic).

H. Accuracy in algebra.

I. General memory of rules and power of applying them (algebra).

From the nine series of marks thus obtained, together with the total marks in geometry, algebra, and arithmetic, coefficients of correlation were calculated by means of Professor Karl Pearson's product-moment formula. These coefficients were then "corrected" for the two disturbing conditions, (1) difference of age; this was found to affect only algebra and H; (2) difference of form; boys in the higher forms had covered a wider range of syllabus than those in the lower; for this, Professor K. Pearson's "correlation ratio," η, was calculated.

The following are a few of the values obtained after applying these corrections:

$$r_{\substack{\text{Geom.}\\\text{Alg.}}} = 0.18 \pm 0.07 \qquad r_{CG} = 0.28 \pm 0.07$$

$$r_{\substack{\text{Geom.}\\\text{Arith.}}} = 0.28 \pm 0.07 \qquad r_{GI} = 0.00$$

$$r_{\substack{\text{Alg.}\\\text{Arith.}}} = 0.76 \pm 0.03 \qquad r_{FG} = 0.41 \pm 0.06$$

$$r_{CD} = 0.91 \pm 0.01 \qquad r_{EH} = 0.33 \pm 0.07$$

$$r_{DG} = 0.11 \pm 0.08 \qquad r_{FI} = 0.04 \ (< \text{P. E.})$$

It will be noticed at once from these figures that geometry and algebra are not at all closely related. As a matter of fact, they owe their relation entirely to the mediation of arithmetic, since, if "partial" coefficients are calculated between the three abilities, the following values are obtained:

$$r_{\substack{\text{Geom.}\\\text{Alg.}}} = 0.00 \qquad r_{\substack{\text{Geom.}\\\text{Arith.}}} = 0.23 \pm 0.07 \qquad r_{\substack{\text{Alg.}\\\text{Arith.}}} = 0.75 \pm 0.04$$

(these are values deduced on the assumption that the third ability is constant throughout the series of cases; cf. the principle of "partial differentiation").

It will also be noticed that G (power to do percentage and proportion sums in arithmetic) is more closely related to essential geometric ability than to essential algebraic ability.

By a thoroughgoing application of the general theory of multiple correlation, many further truths could be established on the basis of

the same data. All that the writer attempts in this note is to demonstrate the practicability of the general idea of his previous article.

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REVIEWS AND ABSTRACTS OF LITERATURE

Life as Reality. ARTHUR STONE DEWING. New York: Longmans, Green, and Co. 1910. Pp. 214.

The aim of the author of this very readable essay is to vindicate his belief in the possibility of a system of idealism which gives "full value to the will-strivings of our life-interests without degenerating into crude individualism." The answer to the metaphysical question is, "Reality is Life." It is evident that everything depends upon what the author chooses to mean by "life." The book is an endeavor to explicate this and to do so within idealistic presuppositions.

The problem of reality is insistent in terms of a contrast between the world of subjective values and the world of objects with which science deals. We need an absolute that will found the reality of both and bridge the chasm. "Sense-experience, science, happiness, the moral law, society, and religion each has its claim, each has its contribution to offer to the totality of human values, each believes itself the final reality in a universe of law and purposes. Beneath and beyond all stands the reality of life" (p. 17).

Sense-experience reveals no world independent of consciousness: ultimately it reveals "our own life-activity." "Behind the experience lies the perception of sense-qualities and behind this the life values which give experience its content" (p. 39). Science, organizing the world of sense-impressions, does so only by "the translation of our own life activity into terms of objective experience." The elements and laws of science are at most the projections of life activities.

Again, in the sphere of morals, reality is not, in the last resort, to be found in objective standards, whether empirical or spiritual. "They can not give values to life, because it is life that determines their own values" (p. 77). The only law that life recognizes, life creates: it is the law of self-expression. This self-expression "is not a matter of crude caprice, but is intimately bound up with the self-expression of others" (p. 82). Yet "society exists for the individual and not the individual for society" (p. 85). Society is part of one's self-expression.

Nor does religion give us the ultimate reality of life. It "fails in the effort to reach final reality because the form in which feeling occurs in our human consciousness is individual, and the form which religion demands of it in order to reach its reality is over-individual and objective" (p. 117). The reality of religion in all its aspects is "a groping for a larger life" (p. 122). Even the God which it creates is not the Divine Personality, universal in the sense of being objective. "Its God is life, because its reality is life" (p. 123).

Life is the criterion of the real and life is the criterion of the true. Not in the pragmatist's sense: for while pragmatism is right in its emphasis upon "the fundamental value of will activity," it is wrong when it tries to lift this "into a theory of logical truth. Its failure is a failure to distinguish between the vital impulses which we feel and those formal categories of logic by which the mind tries to find truth as a thought process. The life values given in the strivings of our will are sufficient without this confusion" (p. 136). If we introduce "consistency" and say that truth works because it is consistent, then the pragmatistic formula becomes of much value so far as it goes. But consistence with what? One makes the correct advance when he views truth teleologically and makes consistency the consistency of purposes. Truth "stands for a meaning in the totality of meanings" (p. 140). The only way we can know this whole of truth, the only way we may test it "is in terms of life values." The unity of truths is the unity of life. This is the only unity we know. Every truth is true "because it comes to our consciousness as a part of the effort to express life" (p. 144).

Long before one reaches the chapter which the author calls "the crux of the book" and which lends the book its title, one has become impatient to know precisely what is meant by this "life" which is to give all meaning to the ontological predicate. Of course nobody disputes that life is real in some sense: all metaphysical speculation finds its genesis in this consideration. But the metaphysical quest has usually proceeded to define this predicated reality and then to interpret life in terms of it. But when one refers reality back to life as to a synonym, one does not thereby evade the necessity of telling just what particular meaning is to be given to life as substituted for reality. The author insists that if one seeks for a definition in logical terms his search is in vain. Life is felt, not known. Or, life is known only in the living: in terms of mere definition we have life no more, but the veriest shadow of life's skeleton. One can say that life is self-expression: but this self-expression we can not know or describe; it can only be felt. Reality is not to be expressed in a philosophic system. "Life feels its own deep reality and beneath this feeling no philosophy nor metaphysics can ever penetrate," for "all the intellectual processes of logic and thought, all the ethical and metaphysical constructions which confine themselves to expressing reality as a closed system of relations, deal forever with externals" (p. 168). "Life itself is its Absolute," and we know this absolute only as an ideal, for we know only our present and immediate moment of life. Yet we know that present reality as only part of a whole since its very nature is dynamic and purposive. And, since the only reality we know is life, the absolute whole must be life as well: but its life, even as the life we now live, is ineffable.

A superficial observer might well suppose that philosophy has come upon sorry days. It is also the pragmatist's assertion that philosophy is inadequate to life, that reason can not present life in its thickness, its flux, its irrationality, its growing character. But is the aim of metaphysics the transcription of life? If so, metaphysics may as well be thrown into the rubbish heap with the other arts that proposed impossible

problems. Certainly life can not be transcribed in any terms, not even in terms of art, which comes nearest to bodying forth life's intimate soul. Furthermore, life does not need transcribing: that were worthless tautology. Truly, as the author well insists, if one wants to know what life is, he must live it.

But philosophy is not an abortive attempt to take life's photograph or to catch life with a metaphysical kinetophonograph. Even the arts do not pretend to reflect life as it is, but to interpret it. And philosophy is not a transcription of life, but an interpretation of the *meaning* of life; primarily it asks not what is real, but what is the meaning of reality. In Professor Royce's words, metaphysics "is a critical study of the meaning of experience, which it therefore presupposes." Of course, life is more than philosophy, than reason. Of course, also, since philosophy states life's *meaning,* it is frankly and solely intellectualistic. And of course, as a result, philosophy is a mere abstraction from life, though an abstraction justified in and through life. And certainly a philosophic system is static: the meaning of the flux can not itself be a flux. The metaphysician is obliged to say to an author who introduces him to life as it is lived, "Very well, I doubt not that life is all that you say it is, and more; and what we all feel it to be: but what, in the name of philosophic inquiry, is the precise meaning of it all?"

In so far as the author interprets life's meaning in terms of totality, and of a totality teleologically interpreted, he is performing the task of a metaphysician and fulfilling his promise to defend an idealistic version of the real. In so far as he insists that meanings are inarticulate feelings, he is a mystic with such metaphysical rights and comforts as a mystic may possess. But the true value of an enterprise like the author's is to warn men of the futility of trying to incorporate life in a philosophic system, for there are some who seem to suppose that this is philosophy's attempt. That such a warning is worth while does not mean that philosophy fails in its real and traditional task. Nor does it mean that life is larger than reason in the sense that life's meaning, which reason seeks, is larger than reason.

The book rings true with the sincerity of a conviction: one feels in it the intention of a metaphysical gospel for the times. There is much up-to-date scientific and philosophic reference and illustration. The style has all the charm and the regrettable ambiguity of being a mean between literary and philosophic. The dedication is to Josiah Royce, and much that is genuinely articulate and of real metaphysical value is very near the idealism of "The World and the Individual."

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JOURNALS AND NEW BOOKS

THE PHILOSOPHICAL REVIEW. May, 1910. *Spencer's Formula of Evolution* (pp. 241–258): H. S. SHELTON. – The inductive unification is overwhelming, nor is the principle pragmatically barren. It is an admirable, and, within reasonable limits, successful attempt to unify

knowledge. *The Philosophy of Schelling* (pp. 259–275): JAMES LINDSAY. – Schelling is a philosopher who has not come to his own. His philosophy is able to kindle speculative forces anew, to supply weighty thoughts for the realizing of the disunion between pantheism and theism, between science and religion, and to point the way to a better world-view. *The Logical Structure of Self-refuting Systems: I. Phenomenalism* (pp. 276–301): EDWARD GLEASON SPAULDING. – A system refutes external criticism if opposed systems are rendered self-refuting by the use of the contradictories of certain principles which not only presuppose themselves, but which, when used in connection with other principles, make that system itself self-critical. Generic phenomenalism and its variants are refuted by that self-critical, self-confirming system which proves to be identical with evolutionary realism. *How Ideas Reach Reality* (pp. 302–318): W. E. HOCKING. – The idea is at the same time an instrument of the self and an instrument of that very reality which it is regarding as its object. *Reviews of Books:* Edward Bradford Titchener, *A Text-book of Psychology, Part I.:* JAMES B. ANGELL. Von Dmitri Michaltschew, *Philosophische Studien:* WARNER FITE. Francis Maugé, *Le Rationalisme comme Hypothèse Methodologique:* W. H. SHELDON. F. M. O'Sullivan, *Old Criticism and New Pragmatism:* G. W. CUNNINGHAM. *Notices of New Books. Summaries of Articles. Notes.*

THE JOURNAL OF ABNORMAL PSYCHOLOGY. April–May, 1910. *Psychogenetic Convulsions* (pp. 1–19): CHARLES D. FOX. – Some important distinctions in origin, symptoms, and treatment between hysteria and psychasthenia, based on clinical observations. "Hysteric manifestations are caused by subconscious association of ideas, while those of psychasthenia usually are caused by conscious association of ideas." *Hysterical Anesthesia* (pp. 19–30): H. LIVENTHAL. – A severe criticism of Janet's hypothesis about this disease, together with an ingenious substitute theory. Hysterical anesthesia is only the abnormal persistence of inattention which occurs at the time of the accident or occasion inducing hysteria. *The Processes Needed to Reorganize the Mental Synthesis in Treating the Neuroses* (pp. 31–32): TOM A. WILLIAMS. – An abstract of Dr. Bellozza's article of this title in the *Revue de Psychiatrie. The Theory of the "Complex"* (pp. 32–34): TOM A. WILLIAMS. – An abstract of Wm. A. White's article of same title in the *Interstate Medical Journal. Reviews:* E. B. Titchener, *A Text-Book of Psychology:* ELLIOTT P. FROST. C. W. Beers, *A Mind That Found Itself:* ERNEST JONES. Wilhelm Steckel, *Nervous Anxious States and Their Treatment:* M. J. KARPAS. Clara Barus, *Nursing the Insane:* EDWARD B. LANE.

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NOTES AND NEWS

THE arrangements for Section H (Anthropology) at the forthcoming meeting of the British Association have just been communicated to us. The preliminary programmes of other sections were stated in *Nature* of July 28. In general ethnography, Mr. E. Torday will describe in Section H some of the tribes encountered in his recent exploration of the Congo area; Mr. Meech will deal with the Sok, of whose language he has made a special study during his residence in Africa; Mr. A. K. Newman, of Wellington, New Zealand, will discuss the origin and racial affinities of the Maori; and Miss Fletcher, of Washington, in an important communication, will deal with certain points connected with exogamy. Miss Fletcher will also contribute an account of recent developments in the study of anthropology in American universities. The archæology of the Mediterranean area will be dealt with by members of the British School at Athens. Dr. T. Ashby, director of the British School at Rome, will describe his excavations at Hagiar Kim and Mnaidra in Malta, and Messrs. Woodward and Ormerod a primitive site in Asia Minor. Prof. W. M. Flinders Petrie will give an account of his excavations at Memphis, and Dr. Seligmann will describe a Neolithic site in the Sudan. An important communication by Prof. Elliot Smith, which summarises the results of ten years' work, will discuss the racial affinities of the Egyptians from the earliest times. Among other archæological papers may be mentioned an account of the work of the Liverpool Committee for Excavation and Research in Wales, by Prof. R. C. Bosanquet, and a report on recent excavations at Caerwent, by Dr. Ashby; a communication from Mr. H. D. Acland will describe prehistoric monuments in the Scilly Isles, and Mr. Alexander Sutherland will give an account of the exploration of a Broch at Watten, Caithness. Friday, September 3, will be devoted to a joint meeting with Section L (Education), in which intelligence tests in school children will be discussed. Among those who have promised papers written from the special point of view of the anthropological section are Dr. Lippmann, of Berlin, Dr. C. S. Myers, of Cambridge, Mr. W. Brown, of King's College, London, Mr. Burt, of the Liverpool Psychological Laboratory, and Mr. J. Gray. Dr. Kerr, medical officer (education) of the London County Council, Dr. W. H. R. Rivers, and others will take part in the discussion. (*Nature.*)